DOCUMENT RESUME

ED 166 422 CE 019 640

TITLE	An Evaluation Study of the District of Columbia Experience Based Career Education Program. Final Report.
INSTITUTION	Creative Research Associates, Inc., Silver Spring, Md.
SPONS AGENCY	District of Columbia Public Schools, Washington, D.C. Dept. of Career Development.; Office of Education (DHEW), Washington, D.C.
PUB DATE	Sep 78
CONTRACT	0589-AA-NS-0-7-6A
NOTE	117p.
EDRS PRICE	MF-$0.83 HC-$6.01 Plus Postage.
DESCRIPTORS	*Academic Education; Basic Skills; *Career Development; *Career Education; Experiential Learning; *Individualized Programs; Program Development; Program Effectiveness; *Program Evaluation; Resource Centers; Secondary Education; Sex Fairness
IDENTIFIERS	District of Columbia; *Experience Based Career Education; Far West Laboratory Model

ABSTRACT

A third-party evaluation of the District of Columbia Experience Based Career Education Program (D.C. EBCE) was conducted in 1978. The program involved tenth- and eleventh-grade students in an individualized program of study that included academic instruction and career development opportunities. Using the Context, Input, Process, and Product (CIPP) design, the evaluation determined the program's success in meeting its goals, which included gaining support of administration and parents; implementation, in terms of management, staff, and effectiveness of the resource site; academic quality; career development; and sex equity. Evaluation instruments included the Everyday Skills Test (reading and mathematics), the Career Maturity Inventory, and the Tennessee Self Concept Scale. These were administered on a pretest-posttest basis along with a writing skill test. Interviews and questionnaires were administered to advisory council members, staff, administrators, parents, and students. Additional information was obtained from records, documents, and observations. The conclusions drawn from these findings were as follow: (1) D.C. EBCE is reaching its goals and is supported by school administration, the community, and parents; (2) more development of resource sites is recommended for future years; (3) the D.C. EBCE's academic program is sound; (4) much progress has occurred in the area of career development; and (5) the Far West Laboratory model adapts well in the Washington, D.C., environment. (Data tables and sample questionnaires are included.) (CT)

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PUBLIC SCHOOLS OF THE
DISTRICT OF COLUMBIA

OFFICE OF THE
EDUCATIONAL PROGRAMS AND SERVICES
CAREER DEVELOPMENT PROGRAMS

AN EVALUATION STUDY OF THE DISTRICT OF COLUMBIA EXPERIENCE BASED CAREER EDUCATION PROGRAM

CONTRACT NO. 0589-AA-NS-0-7-6A

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Evaluation Project Director

FINAL REPORT

SEPTEMBER, 1978

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ACKNOWLEDGMENTS

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EXECUTIVE SUMMARY

BACKGROUND

Creative Research Associates, Inc. conducted a third-party evaluation of the District of Columbia Experience Based Career Education Program (D.C.EBCE) for 1977-78. Funds for this program were made available by the U.S. Office of Education under Part D, Section 142(C), Vocational Education Act.

In this, its second year of operation, D.C.EBCE provided combined learning activities inside and outside of the classroom for 72 tenth and eleventh grade students. In this model, developed by the Far West Laboratory, the students participate in an individualized program of study that included academic instruction as well as career development opportunities. Resource sites, including private companies and governmental organizations, provided meaningful learning activities which included opportunities to become familiar with a variety of careers and work settings.

After an initial period of orientation, D.C.EBCE students developed, under the tutelage of teacher-coordinators, an individualized learning program, which reflected academic requirements, basic skills and career interests. Students were to select up to five sites for the school year. In the interest of developing concepts of sex equity, one of the five project sites was to provide career exploration in a "non-traditional" sex role. Over 200 resource site were identified. At each site, a resource person worked directly with students and served as liaison between the program and work site.

The D.C.EBCE staff consisted of a program director, three teacher coordinators, a resource analyst, a skills specialist and a secretary. Extensive internal staff development and continued training (from the prior year) by the Far West Laboratory prepared the staff for the roles and responsibilities requisite for this EBCE model.

During this year, a D.C.EBCE subcommittee of the D.C. Career Education Advisory Council was formed and provided advice and support to the program.

PURPOSE AND DESIGN OF THE EVALUATION

The purpose of the evaluation was to determine the D.C. EBCE program's success in meeting its goals, both broad and specific. Synoptically, these were the following:

1) Institutionalizing D.C.EBCE, assessed in terms of administrative support, Advisory Council support, parental support and dissemination activities;
2) Implementation of the program, assessed in terms of management, staffing, staff development, staff effectiveness, resource site effectiveness, and an effective academic program;

3) Academic quality, measured in terms of standardized tests of reading and mathematics, writing skills, and school performance;

4) Career development, to assess the development of career skills and attitudes requisite to making informed decisions;

5) Adapting the Far West Model to the Washington, D.C. environment;

6) Sex equity, assessed in terms of program activities and student outcomes.

The Context, Input, Process and Product (CIPP) design was used by the evaluators to examine the relationship of strategies and procedures with actual results. Within this design the evaluators established the goal statements and their component parts and sought data and information sources related to each.

Instruments and data sources included a standardized achievement test of reading and mathematics (the Everyday Skills Test), the Career Maturity Inventory (CMI), and the Tennessee Self Concept Scale (TSCS) each of which were administered on a pretest-posttest basis to both D.C.EBCE and control students. Additionally, a writing sample was used to aid D.C.EBCE students in writing skill improvement and to assess program impact.

Qualitative and perceptual data were acquired from interviews and questionnaires administered to school administrators, Advisory Council members, program staff members, parents, and the students themselves. Additional information was obtained from records, documents, and observations.

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Salient findings yield the following major conclusions and recommendations about the D.C.EBCE program:

1) Institutionalizing D.C.EBCE

D.C.EBCE is more than adequately addressing the issue of gaining acceptance as an integral part of the D.C. Schools program offerings as an alternative form for high school students. Support of the school administration, the employing community, the Advisory Council and parents is clearly in evidence. This area will require continued attention as the program moves out of its formative stages; and it is recommended that the program administration examine and decide upon a viable alternative strategy for program infusion to be implemented by the end of the 1978-79 school year. A permanent site, resource and facility sharing, and administrative reporting, and staffing requirements should be considered to accommodate larger student enrollments in an expanded program.

2) Implementation of the Program

D.C.EBCE is very well managed and has acquired and trained a staff capable of delivering services effectively. Although resource sites have been developed more than adequately for the most part, further attention in this area is required to assure quality learning experience for all participating students.

3) Academic Quality

D.C.EBCE is implementing a sound individualized academic program. Improvements are noted in teaching skills and in written grammer, punctuation and spelling. Eleventh grade students maintained their skills in mathematics. Grade point averages were more than acceptable with an average of 2.4 (C+), and the earning of Carnegie units was an acceptable 2.5 for the year. A small decline in mathematics for 10th graders was probably due to the late placement of a skill specialist (March 1978), which was beyond the control of the program. The D.C.EBCE staff has developed sound plans for effecting even further improvements in the academic performance of its students.

4. Career Development

Student and teacher coordinator reports indicate much progress in this area. For example, more than 75% of the students felt that they learned more about work and careers; learned how school subjects relate to the world of work; learned about their own talents; and become more interested in their studies. In addition, students reported that they learned about the importance of career planning, and how to apply for a job.

Teacher-coordinators, administrators, and the Advisory Council felt that the career development aspect of the program was perhaps its most important.

However, the staff recognized that there is room for improvement in this area, and that further development of career guidance sessions and resource site experience is in order. As part of its career development strategy for the coming year D.C.EBCE will have the services of a newly assigned Career Advisor, as well as the continuing resources of the teacher-coordinator responsible for the guidance function.

D.C.EBCE students did not achieve positive gains on the Career Maturity Inventory, the standardized instrument used to assess career development. We are, however, unable to judge whether the CMI was fully suitable to properly assessing gains actually achieved. The evaluators will continue to assess the suitability of this instrument.

5. Adapting the Far West Laboratory Model to the Washington, D.C. Environment

The Far West Laboratory model is quite well suited

CHAPTER I

BACKGROUND TO THE EVALUATION

THE CAREER EDUCATION CONCEPT

The career education concept encompasses a wide spectrum of both theoretical and practical educational experiences pertaining to work. Career related training activities include theoretical works pertaining to career development, occupational and career maturity, and the development of career concepts. On the practical side, career education provides necessary information concerning the policies and guidelines behind state legislation for career education, as well as information to facilitate the development and implementation of career education curricula in public school systems. Various publications involved in the dissemination of career education concepts can also be included under the concept of career education. In short, the career education concept is best defined by the totality of educational experiences through which an individual learns about work.

The career education concept came, during the 1970's, in the wake of serious reevaluation of the effectiveness of American public school education. A scrutiny of primary, secondary and post-secondary curricula and methods focused upon a dual relationship between learning in the classroom and the application of that education outside of the school environment. Educational experiences ought not be directed only toward student interest in learning and toward learning for its own sake. Rather, without denying the traditional basis of a liberal education, this rethinking of public-school policy insisted that the knowledge and skills imparted in the classroom should be applicable to meeting requisites for careers in business and industry and in other services to society.

Although, at its outset, the career education concept was addressing itself to an already existing aspect of public school education, its reemphasis on the usefulness of education promised an effective alternative to modes of education that had too often become dissapointing in their results. Although the very details and outcomes of the career education concept had not been entirely determined, they nevertheless suggested a new direction in education for meeting student needs.

The enactment of career education legislation by state legislatures and the Congress of the United States in the early 1970's gave this new concept considerable prominence in the eyes of educators and the public at large. Funds for the implementation of career education programs were made available throughout the country. A special commission for career education was appointed by the U.S. Office of Education to oversee the operations of these federally supported programs.

Interest in the career education alternative was first aroused when the United States Commissioner of Education, Sidney P. Marland, Jr., introduced the concept as a reform measure before a gathering of the National Association of Secondary School Principals in January 1971. Marland argued that the emphasis of secondary public education on preparation for college-entrance requirements was often irrelevant to the general educational needs of students. Marland's proposal emphasized a more practical integration of vocational, college-preparatory and general education student needs in the public-school classroom.

Marland's proposal was a general statement, and specific steps for the implementation of the concept in schools and communities were not introduced. The details of the implementation were "to be left to the decision of local shcool boards, teachers, students, the business community, labor, and others directly involved." This initial statement of the career education concept was tentative and broad enough to assure that the concept itself could be successfully adapted to the real educational needs of various communities.

Marland's idea of career education was directed more immediately to the requirements of secondary school education, but he did feel that his program would give impetus to improvements in public school education for all grade levels and in all subject areas. Furthermore, a distinction between the career education needs of primary and secondary school students was made: that the educational process initially foster student awareness of the variety of occupational opportunities and the skills required for those positions, and that the formal educational experience should culminate in the actual practice of work related skills and "hands-on" experience at job sites.

GOALS AND OBJECTIVES OF CAREER EDUCATION

No program evaluation is possible without a thorough examination of the program's objectives. Therefore, our first task was to identify the goals and objectives of career education, and review D.C.EBCE objectives in light of them.

The concept of career education has been variously defined. In 1975, Kenneth B. Hoyt characterized career education as, "the total effort of public education and community to help individuals become familiar with the values of a work-oriented society, to integrate those values into their personal value systems, and to implement those values in their lives in such a way that work becomes possible, meaningful, and satisfying to each individual." [1]

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[1] *Kenneth B. Hoyt, in Career Education: Contributions to an Evolving Concept (Salt Lake City, Utah; Olympus Publishing Company, 1975) p.156.*

Hoyt derived three primary objectives from his definition of career education:

"1. to help all individuals to become familiar with the values of a work-oriented society;

2. to encourage individuals to integrate their work values into a personal value structure; and

3. to assist individuals in implementing work values in their lives."[2]

PROGRAMMATIC ASSUMPTIONS

Hoyt's analysis of the career education concept included the discussion of several underlying programmatic assumptions. When taken together, these assumptions provide a solid basis for adapting career education to specific educational conditions and suggest specific aspects of education requiring the attention of career educators. Although these assumptions were stated by Hoyt in theoretical terms, their practical aspect was easily apparent.

The career education concept is assumed to be motivating to students, since there is a directly proportional relationship between increased student motivation and the degree to which a student understands the relationship between education and work. Career education should be introduced early on, since the elementary school years are critical for the development and formation of work and personal values. And, alienation among teachers and students in the school environment can be reduced through the application of the same strategies used to reduce worker alienation in industry.

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[2] *Kenneth B. Hoyt, in* ***Career Education: Contributions to an Evolving Concept*** *(Salt Lake, Utah; Olympus Publishing Company, 1975) pp. 157-58.*

The career education concept further assumes that work is satisfying when it has purpose and allows the worker to make concrete accomplishments that are self-enhancing. Hoyt's discussion of the remaining assumptions largely addresses itself to the achievement of this possibility through educational means. Career education should not be conducted through one learning strategy or approach that is considered best; rather, a variety of approaches provides the optimal advantage for learning. Career education should impart those vocational skills without which there can be little chance for success in work. To assure that a wide choice of occupations is not narrowed by job stereotyping, especially for females and members of minorities, specific programmatic intervention strategies should be introduced. To further strengthen student career development, decision making skills should be taught. Finally, career education should be addressed to the needs of the individual student, since the maturational patterns of career education differ for each individual.

Although these assumptions advance an entire strategy for the implementation of career education, perhaps more importantly they emphasize the need for that implementation.

EDUCATIONAL MODIFICATIONS FOR CAREER EDUCATION

Advocates of the career education concept proposed that its implementation should proceed through changes in the American school curriculum, so that less imphasis would be placed upon differentiation between college-preparatory, general education, and vocational education programs.

Further modifications of the educational structure were required to allow for the sort of flexibility most conducive to successful career education strategies. This entailed a redefinition of student achievement in school, so that the assessment of student performance would not be limited to experiences in the traditional classroom setting as measured by Carnegie Units. The idea of a year-round school was encouraged to change the concept of school from a separate to an integral factor in daily living, both at home and at work. The participation of students, teachers, parents, and representatives of business and the community in formulating educational policy was proposed to assure that public-school education would be responsive to the real needs of the community. Career guidance, placement and follow-ups should be made more central to school operations; and this new emphasis should be supported through a greater use of educational technology. The early proponents of career education were proposing a revitilization of public-school education, so that it would enjoy a sense of purpose that had become too often lacking and too often only an obligation without any deeper motivation behind it.

Finally, it was proposed that the career education concept should be introduced as widely as possible into teacher training programs. Again, these suggestions were very much based upon Hoyt's arguments.

SPECIFIC STUDENT OUTCOMES FOR CAREER EDUCATION

The United States Office of Education identified nine student outcomes for career education. Career education should produce students who are:

"1. competent in the basic academic skills required for adaptability in our rapidly changing society;
2. equipped with good work habits;
3. capable of choosing a meaningful set of work values, leading to a desire to work;
4. equipped with career decision-making skills, job-hunting skills, and job-getting skills;
5. equipped with vocational personal skills at a level which will allow them to gain entry into and attain a degree of success in the occupational society;
6. equipped with career decisions which they themselves

make, based on the widest possible set of data concerning themselves and their educational-vocational opportunities;

7. aware of means available to them for continuing and recurrent education, after they will have left the formal system of schooling;
8. successful in being placed in a paid occupation, in further education, or in a vocation which is consistent with their current career education; and
9. successful in incorporating work values into their total personal value structure in such a way that they are able to choose what, for them, is a desirable life style."[1]

The primary goal of the career education concept is to imbue all segments of the American school system with a practical application to work and career values. Although its emphasis upon usefulness casts career education in a rather untraditional light, its commitments remain directed at traditional student outcomes that are no longer always attained in the traditional public-school environment. Student outcomes are intended for the good of society, but they are equally intended for the good of the individual.

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[1] *Hoyt, p.29.*

Revisions in the K-12 curriculum are proposed to meet the requirements and needs of all students, in an alternative manner. Perhaps the most crucial outcome of career education is that students realize the ability to continue their educational experiences through their work daily lives once they have left the classroom.

EXPERIENCE-BASED CAREER EDUCATION (EBCE)

The initial step of implementation of the career education concept involved the development of Experience-Based Career Education models sponsored by the National Institute of Education. This collaborative effort involved: the Appalachia Educational Laboratory in Charleston, West Virginia; the Far West Laboratory in San Francicso, California; the Northwest Regional Educational Laboratory in Portland, Oregon; and Research for Better Schools in Philadelphia, Pennsylvania.

The National Institute of Education described the experimental program as one which, "combines learning activities outside and within the school into a balanced, comprehensive, individualized program for high school students." It continues, "The community is analyzed for its potential as a learning resource. Student experiences in the community are then carefully planned, supervised, and evaluated. Students learn subject matter normally studied in the classroom, but they learn through the practical application of academic disciplines in the workaday world. They explore important new dimensions about themselves and potential careers, and they learn how to make informed career decisions."[1]

The four model operations of EBCE began under the auspices of the U.S. Office of Education in 1971. Although each regional laboratory has provided a distinctive model, the operational formats produced have many things in common. Their own evaluation results have clearly indicated that EBCE is an effective educational alternative for senior high school students.

In a comparison of the four EBCE models, four major components are evident: curruculum, employer/community participation, guidance, and management. Evaluations have reaffirmed a theoretical assumption of career education, that student awareness of the correlation between formal education and the world of work is highly motivating. High student academic achievement is compounded by useful on-site job experience. The evaluations have further emphasized the significance of the input of special counselors and program managers, participating parents, and employers who are broadly-based and outside of the schools.

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[1] *A Comparison of Four Experience-Based Career Education Programs*, (The National Institute of Education, HEW, Washington, D.C. 1976), p.1.

More than 80 various educational agencies in forty-six states and the District of Columbia were involved in the implementation and development of EBCE programs as of December, 1976. These programs assume the form of Demonstration Sites, Pilot Sites, Market Demand Sites, or Vocational Educational Act-Part D Sites.

THE FAR WEST LABORATORY MODEL

The particular model introduced by D.C.EBCE was developed by the Far West Laboratory. This model was developed by the career education researchers at the Far West Laboratories of the National Institute of Education, Oakland, California, and has been successfully tested in the Oakland public schools. The program started on an experimental basis and under a controlled environment in 1974 with 30 students from the city of Oakland. Soon after, Highland High School, Salt Lake City, Utah; Pacific Horizons High School, Stockton, California; and Edison High School, Fresno, California adopted the model as part of their alternate high school programs. The Far West High School is where experiments were first conducted in EBCE, and the school continues to function as a laboratory school with a student body of approximately 200 and a staff of ten.

The Far West Laboratory Model adopted by D.C.EBCE has ten major features. They are:

"1. EBCE enlists competent adults from all sectors of the community as colleagues in the educational process. They share their daily activities, skills and knowledge, and often increase learning incentive by serving as adult models with whom students can identify.

2. It redefines the role of school staff, who become primarily learning coordinators and facilitators rather than teachers in the traditional sense.

3. The student plays a central role in planning and carrying out his own learning, mainly through individual projects which are carefully designed to blend growth in academic, interpersonal, career, and basic skills.

4. Learning activities occur primarily at resource sites in the community, supported and supplemented by staff and instructional materials at an EBCE center.

5. The instructional program focuses on core 'process skills' essential for independent and lifelong learning: inquiry, problem-solving, decision-making; and basic skills in oral and written communication, reading, and mathematics.

6. While 'booklearning' is essential to the EBCE process of 'learning by doing', traditional subject matter is not approached as a syllabus of prescribed

and sequenced content. Instead, a given discipline is a context in which students can frame questions they deem important, and seek answers by applying academic skills in particular situations.

7. Curricular aids, called Project Planning Packages, provide students and staff with a convenient framework for designing projects that integrate academic and career learning. Each package unites a study area (such as social science) and careers associated with it under a single heading. It includes goals, relevant concepts, issues and topics, sample projects, a list of available resources, and suggested readings.

8. While the student is given freedom to pursue self-chosen learning goals that have personal relevance, he is held strictly accountable for his educational progress through carefully specified program procedures. Credit is awarded only for completed work and demonstrated progress. It is then converted into local high school equivalencies, resulting in a standard diploma and transcript.

9. The program is designed as an alternative for all students - regardless of academic backgrounds or future plans - so long as they are willing and able to profit from the EBCE style of individualized, experience-based learning.

10. In focusing on career preparation, the program defines 'career' as 'one's progress through life', not as a particular job, and views preparation as acquiring the skills, knowledge, and personal versatility one needs in order to choose, pursue, and find satisfaction in a life role."[1]

The broad goal of the Far West Model is to produce graduates who are turned on to learning by their ability to view every situation and contact as an educational opportunity. The program is intended to provide students with skills sufficient for establishing and achieving important goals in their lives. Although Self Development and Career-Awareness Development are emphasized, the model also provides for the enhancement of basic skills (reading, writing, oral communication, and communication skills) in conjunction with Life Skills, such as interpersonal relationships, critical analysis of information in order to draw conclusions, problem solving by the evaluation of alternatives, and social decision making.

According to the Far West Model, education is a joint endeavor with students, staff, and the community playing active, but distinct roles that are inter-related in many ways. Therefore, EBCE seeks the cooperative efforts of the community resources in its training program. The staff provides the necessary guidance for the students to learn through association, experimentation, exploration, and application. The model is flexible enough to allow for the project staff to make minor changes in the structure and implementation system in order to adapt the model to local conditions.

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[1] *James M. Johnson, EBCE: The Far West Model - A Program Overview Oakland, California; Far West Laboratory, 1975, pp. 2-3.*

INITIATION OF D.C.EBCE

In 1974, a group of program and administrative personnel from the D.C. Public Schools was sent to observe the actual operation of the Far West model, and they were convinced that this model, with minor changes, could be successfully adapted for system-wide career education programs. Upon the application of the D.C. Schools for a grant allowing for the adoption of the Far West Laboratory Model, a grant was received for the implementation of the program.

The D.C. Public Schools have now established an Experience Based Career Education Program to serve as a comprehensive, individualized and alternate plan of learning for high school youth. The plan relies upon the active participation of the community to provide direct, non-paid learning experiences in real-life situations as preparation for future careers. The program is administered by the Division of Career Development Programs of the D.C. Public Schools as a three-year, re-negotiable, experimental project commencing during the 1976-77 academic year.

In general, it can be said, that the D.C.EBCE program adopted all of the main features of the Far West Laboratory Model. In addition, special provision was made for the utilization of mathematics, science, foreign language and communication laboratories at local high school skill centers and college and university campuses in order to meet the basic competency requirements of students and to closely coordinate D.C.EBCE with other existing programs in the school system. Eastern High School, located in close proximity to the D.C.EBCE Center, was used as the host high school for the program. Also, deliberate emphasis has been placed on the elimination of sex bias and sex role stereotyping in the selection of staff and students, in the tasks to be done by students (one out of every five careers explored must be done in a non-traditional sex role area), and in the carrying out of such other D.C.EBCE activities as the selection and orientation of resource persons and dissemination of program information.

CHAPTER II

EVALUATION DESIGN

PURPOSE AND GOALS OF THE EVALUATION

The purpose of the third party evaluation is to determine the D.C.EBCE's success in meeting certain goals and objectives. The evaluation report is addressed primarily to the administration and staff responsible for its implementation at the local level. The goals and objectives used in this evaluation have been synthesized from a number of sources and are not the only objectives stated in the program proposal. This synthesis was carried out to focus upon broad areas of program process and development as well as student outcomes and benefits.

The broad areas of the program, as synthesized by the evaluators in the form of questions, and viewed as goals, are as follows:

1. Institutionalizing D.C.EBCE

   What initial steps have been taken to infuse D.C.EBCE into the permanent offerings of the D. C. Public Schools? What is the level of support from the school administration, advisory council, parents, and resource sites? What dissemination activities have taken place?

2. Implementation of the D.C.EBCE program

How well is the program managed and staffed? What staff development has taken place? Are staff members effectively carrying out their roles and responsibilities? Are individualized academic learning experiences being provided?

3. Academic Quality

To what extent did D.C.EBCE students maintain or improve upon academic skills as measured by standardized tests of reading and mathematics, writing skills, and academic credits earned?

4. Career Development

To what extent have students developed the skills and attitudes requisite to making informed career decisions and broadened their knowledge of the world of work?

5. Adapting the Far West Laboratory Model to Washington, D.C. environment

What necessary changes in the model have been identified by the staff or are evident from the data?

6. Sex bias and sex role stereotyping

What steps have been taken to establish sex equity in the program and with what success?

The goals and aims of the program are not identical with its specific objectives. Conclusions based exclusively on the stated objectives would not yield a sufficient assessment of the overall project since, by themselves, they do not depict all of its important elements. Thus, we have not limited the evaluation to evaluation by objectives, but instead have examined the major parameters essential to establishing the viability and validity of the program.

EVALUATION MODEL

In order to focus on the varied dimensions of this program, the evaluators have used a Context, Input, Process, and Product (CIPP) evaluation model based on that developed by Daniel Stufflemeam.[1] This approach allows the evaluator to consider the interrelationship of procedural and intended elements with product and actual results. It stresses a systematic, cyclical approach in assessing a given project. Furthermore, it provides a convenient framework for assimilating multiple sources of data and relating these data to decision-making about major elements of a project.

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[1] *Daniel L. Stufflebeam, "Educational Evaluation and Decision-Making", in Blaine R. Worthen and James R. Sanders, Educational Evaluation: Theory and Practice (Worthington, Ohio: Charles A. Jones, 1973), pp.128-142.*

The following paradigm[1] depicts the four elements of the CIPP model:

	INTENDED	ACTUAL
ENDS	(planning) CONTEXT	(recycling) PRODUCT
MEANS	(structuring) INPUT	(implementing) PROCESS

In relation to administrative decision-making, "*context* evaluation serves planning decisions to determine objectives; *input* evaluation serves structuring decisions to determine project design; *process* evaluation serves implementing decisions to control project operation; and *product* evaluation serves recycling decisions to judge and react to project attainments."[2]

More precisely, context evaluation aims at defining the operating context, identifying and assessing needs and opportunities, and diagnosing problems related to the needs and opportunities. Input evaluation analyses system capabilities, input strategies, and implementation designs. Process evaluation identifies strengths and weaknesses in the procedural design and its implementation. Also, it maintain records about procedural events and activities. Product evaluation, the last phase in the cycle, produces outcome information and relates this information to objectives and to context, input, and process information.

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[1] *Based on Stufflebeam, p.135.*

[2] *Stufflebeam, p.136.*

EVALUATION DESIGN PROCEDURES

The design for the evaluation consists of five parts: (1) establishing a set of primary goals of the D.C.EBCE project; (2) identifying relevant data and information, and determining the most appropriate sources; (3) selecting and administering instruments for data gathering; (4) analyzing the data by means of statistical and non-statistical treatment; and (5) relating the results of the analysis to primary goals.

FIGURE 1

EVALUATION FORMAT

Goal	Related Information	Information Sources
1. Institutionalizing D.C.EBCE- What initial steps have been taken to infuse D.C.EBCE into permanent offerings of the D.C. Public Schools? (Note: The D.C.EBCE program is in its formative stage. Hence, emphasis is placed upon initial steps toward infusion, however tentative, and the development of strategies for infusion in the future.)	1.1 Administrative Support	1.1 Interview School Administrators.
	1.2 Advisory Council Support	1.2 Advisory Council Questionnaire. Observation of meeting, meeting minutes, Program Director.
	1.3 Parents	1.3 Parent Questionnaire.
	1.4 Dissemination Activities	1.4 Records & Documents, Program Director.
	1.5 Resource Site Support	1.5 Records & Documents, Program Director.
2. Implementation of the D.C.EBCE Program- What was the quality of implementation of the program in a number of key areas? (Note: Earlier evaluation reports established that major start-up steps had been accomplished. Thus, we directed our attention to qualitative assessments.)	2.1 Program management, decision making, responsibility and authority	2.1 Observation, Records & Documents, Interviews with Program Director, Administrators, Staff and others.
	2.2 Staffing and Staff development	2.2 Staff interviews, Program Director, Observations, Documents, Student Questionnaire.
	2.3 Resource Site Learning Experiences	2.3 Program Director, Staff Interviews, Documents, Student Questionnaire.
	2.4 Individualized learning Experiences	2.4 Student Questionnaire, Staff Interviews, Documents.

FIGURE 1 (continued)

EVALUATION FORMAT

Goal	Related Information	Information Sources
3. Academic Quality - To what extent did D.C.EBCE students maintain or improve upon academic skills?	3.1 Standardized test results	3.1 Everyday Skills Test in Reading and Mathematics, Comparative Analysis of Pretest and Posttest Results.
	3.2 Writing Skills	3.2 Writing Samples Based on Pretest-Posttest.
	3.3 Academic Achievement	3.3 Grades earned.
		3.4 Carnegie Credits earned for the Year.
4. Career Development - To what extent have students developed the skills and attitudes requisite to making informed career decisions and broadened their knowledge of the world of work?	4.1 Standardized Career Inventory	4.1 Career Maturity Inventory
	4.2 Perceptions	4.2 Student Questionnaire, Staff Interviews, Records and Documents.
5. Adapting the Far West Laboratory Model to the Washington, D.C. Environment - What changes in the Model have been identified or are evident from the data?	5.1 Staff observations	5.1 Staff Interviews.
		5.2 Records and Documents.

FIGURE 1 (continued)

EVALUATION FORMAT

Goal	Related Information	Information Sources
6. Sex Bias and Sex Role Stereotyping - What steps have been taken to establish sex equity in the program and with what success?	6.1 Program activities 6.2 Perceptions	6.1 Staff Interviews, Program Director, Records and Documents. 6.2 Student Questionnaire, Staff Interviews.

EVALUATION FORMAT

The overall format for the evaluation relates the goals of the program to information and data sources, and is depicted graphically in Figure 1. The results in Chapter III are reported congruent with this format.

The data and information sources are described next.

DATA AND INFORMATION SOURCES

1. Administrators Interview

   To obtain administrator's perceptions of the progress of the project, its management, and their support for it.

2. Program Director's Conferences

   Frequent conferences were held with the program director to gather information on all aspects of program activities and operations and to provide the program director with feedback as to observations made by the evaluators.

3. Staff interviews

   To obtain the perceptions of the teacher-coordinators, resource analyst, and skills specialist regarding their roles and responsibilities, professional growth, staff development, communication, cooperation, program management, students' academic and career progress, the quantity and quality of resource sites, strengths and weaknesses of the program, and suggestions and plans for program improvement.

4. **Advisory Council Questionnaire**

To obtain their perceptions of the program, its strengths and weaknesses, and their support for it.

5. **Parents' Questionnaire**

To elicit their perceptions of the program, their childrens' reactions, and the extent of support for the program.

6. **Students' Questionnaire**

To elicit students' reactions in many areas such as career development, individualized instruction, resource sites, interest and motivation, staff relations and the like.

7. **Records, Documents and Observations**

To assess program operations and support, dissemination, and student progress. Records and documents included the Far West Laboratory EBCE Manuals, Quarterly Reports, the Resource Persons' Handbook, recruitment literature, dissemination literature, reports of D.C.EBCE workshops and programs, and student records of course credits and absences. Observations of meetings, program activities, and dissemination efforts were carried out as opportunity permitted.

8. **Everyday Skills Test (EST)**

A standardized test used to assess academic progress in reading and mathematics. This instrument was administered to students on a pretest-posttest basis and to a control group. This test has three advantages:

(a) it is suitable for an inner city population;

(b) it was administered in the Fall 1977 semester as part of the D.C. Public Schools regular testing program (thus avoiding duplication of testing); and

(c) it is relatively brief in terms of testing time requirements - about 2½ hours. (Details of the test administration, sampling, control group, and method of analysis are given later in this chapter).

9. Career Maturity Inventory (CMI)

A standardized instrument for career development, this instrument was also administered to students on a pre-test-posttest basis and to a control group. The CMI was used to gauge both attitudinal and career competence dimensions. At present, this instrument appears to be the most suitable standardized instrument available for the measurement of impact on EBCE students.

The CMI contains two sections. The first section, the Attitude Scale, contains fifty items. This Scale, according to the CMI Administration and Use Manual, is a valid measure of career-choice attitudes. It is a means of charting students' career maturation and assessing the quality of their career decision-making.

The second section, the Competence Test, contains five parts with twenty items in each. These parts were used to reduce testing time requirements, namely: Knowing Yourself (Self-Appraisal), Choosing a Job (Goal Selection), What Should They Do? (Problem Solving). The Competence Test is considered, by its authors, to complement the Attitude Scale in studying career development; assessing curricular and guidance needs; evaluating career education; and testing in career counseling. This section of the CMI, despite the lack of sufficient data to ascertain its validity, was selected in the absence of a more suitable instrument to determine the degree of students' career competence orientation to the world of work, and the acquisition of usable career skills.

As with the EST, further technical details are given later in this chapter.

10. Tennessee Self Concept Scale (TSCS)

To assess gains in self-concepts as indicated in one of the objectives stated for the program. This instrument (Counseling Form) was also administered to students on a pretest-posttest basis and to a control group. It was also intended that pretest results be used when appropriate for student guidance.

The TSCS Yields two scores. The "Self Criticism Score" checks on the extent to which an individual is realistic about common shortcomings that are typical of most people. The "Positive Score" addresses itself to how the individual feels about himself, what he does, and who he is.

Extensive reliability and validity studies have been done; administration time is only 20 minutes; readability is at about the sixth grade level; and the test has been used before with inner city adolescents.

11. Report Writing Sample

A report writing sample was devised by the evaluators. Report writing appeared to be an important aspect of student academic progress because of the many writing tasks included in the EBCE program. The Report Writing Sample asked students to address the relationship between school and careers. Quantitative scoring yielded the number of ideas presented; the number of errors (grammar, spelling, punctuation, etc.); and percentages of ideas and errors to the number of words written.

This instrument was administered on a pretest-posttest basis to D.C.EBCE students to assess needs for improvement in writing skills (from the pretest) and to assess student gains.

DETAILS OF THE DESIGN FOR STUDENT OUTCOME MEASURES

As noted earlier, three instruments were used to measure student outcomes on a pretest-posttest basis using a comparison group - the EST to assess academic progress in reading and mathematics; the CMI to assess career attitudes and competence development; and the TSCS to assess gainsin self-concepts.

The details of the sampling of the D.C.EBCE and control groups, test administration, and methods of analysis are presented here.

Sampling

Several factors prevented the use of a random assignment process, the most scientifically desirable procedure in the construction of the D.C.EBCE and control samples. First, the recruitment and selection process was already under way when the evaluation team started; hence, we did not have the opportunity to suggest such a procedure. Secondly, although the program recruited citywide, there was an insufficient number of eligible applicants to place in a control group. Third, the program for 1977-78 included a number of students who continued from the summer term.

For these reasons, the evaluators decided to use a matched groups design recognizing the limitations inherent therein. Citywide sampling for the control group was considered; however, it was decided that this procedure was not feasible.

Cooperation from a nearby high school was obtained for the control group sample. Four intact classes (rather than school-wide random sampling) were used (2 each from grades 10 and 11) to avoid disruption of classes and the teaching process. The resulting sample sizes were 72 for D.C.EBCE and 95 for the control group. It was felt that the large control group sample size should be obtained to allow for attrition from pretest to posttest and to adjust for differences that might arise in sex distributions or in pretest results. The reader may note that the sample attrition from pretest to posttest proved to be the major limiting factor in the comparative analysis.

Test Administration

The Everyday Skills Test was administered as the pretest in November 1977 as part of the D.C. Public Schools' regular testing program. The EST was administered as the posttest in June 1978.

The CMI and TSCS were administered by the D.C.EBCE in September for the pretest and in May for the posttest. Due to circumstances beyond the control of the evaluators and the program director, delays in scheduling were encountered in the administration of the pretests to the control group. The control group pretests were not administered, therefore, until November, 1977. The posttests of the CMI and TSCS for the control group were administered concurrently with the D.C.EBCE group in May, 1978.

Every attempt was made to make the testing conditions for the D.C.EBCE and control groups as similar as possible. Test administrators were carefully trained and the rooms used for testing were similar. Inevitably, however, due to differences in the locations, some differences may have occurred.

Comparability of Testing Groups

The lack of random sampling and the differing pretest dates for D.C.EBCE (September 1977) and controls (November 1977) for the CMI and TSCS were two of the factors limiting the comparability of the groups. Furthermore, there was substantial attrition in the groups from pretest to posttest.

Nevertheless, the groups were generally comparable on the pretests.

Statistical Treatment

The "t" test of statistical significance was used to analyze the pretest and posttest scores for each score of the EST, CMI and TSCS in comparisons of the D.C.EBCE and control groups. The null hypothesis was rejected at the .05 level of confidence.

Percentile conversions were made for the CMI. The TSCS is presented in standard scores and requires no conversion. Raw score results are presented for the EST.

ADMINISTRATION AND ANALYSIS OF INTERVIEWS AND QUESTIONNAIRES

Questionnaires for students, parents and the Advisory Council were administered in May 1978. Interviews of administrators and staff were conducted in June.

Frequencies and percentages were used to analyze the structured response items in the questionnaires. Interviews and "open-ended" items in the questionnaires were catagorized by content, with both summaries of the consensus responses as well as divergent opinions.

PERIODIC FEEDBACK TO THE PROGRAM STAFF

To aid in the process of program improvement, the evaluators provided data and information to the staff as it became available. This attempt encompassed formative evaluation observations delivered in conferences, as well as student data useful to program planning - e.g., test and questionnaire results of pretests and posttests.

These evaluators view this feedback process as essential to an effective third-party-program relationship. Data and information provided are not necessarily a part of this report.

RECYCLING THE EVALUATION PROCESS

It should also be observed that the evaluation process itself requires continuing improvements. To this end, the evaluators together with the program director have identified certain areas of design, sampling and instrumentation that will be made a part of the evaluation design for the next year of this worthwhile program.

CHAPTER III

PROGRAM EFFECTIVENESS

INTRODUCTION

This chapter contains the findings of the evaluators as to the program's effectiveness in meeting both its broad and specific goals. Seven areas are examined:

1. **INSTITUTIONALIZING D.C.EBCE**

   In its formative stages, one of the aims of D.C.EBCE is to offer an alternative form of education to high school students in the D.C. Public Schools. The institutionalization of D.C.EBCE is assessed in terms of administrative support, employer support, Advisory Council support, parental support and dissemination activities.

2. **IMPLEMENTATION OF THE PROGRAM**

   The D.C.EBCE program was implemented in the previous school year. The evaluators were concerned with examining the quality of the continuation of this implementation, especially in terms of management, staffing, staff development, staff effectiveness, resource site effectiveness, and an effective academic program.

3. ACADEMIC QUALITY

D.C.EBCE is an individualized learning program that integrates resource site experiences, workshops in academic subjects, and individual study in order to meet its dual goals of academic achievement and career development. The evaluators were concerned with determining the extent to which students maintained or improved their academic skills. This is measured in terms of the Everyday Skills Test in reading and mathematics, a special writing sample instrument, course grades and the academic credits earned.

4. CAREER DEVELOPMENT

The career development aspect of D.C.EBCE has a double focus: to develop students skills and attitudes requisite to effective career decisions and to develop extensive student knowledge of the world of work. The evaluators examined this area in terms of the Career Maturity Inventory and student and teacher perceptions.

5. ADAPTING THE FAR WEST LABORATORY MODEL TO THE WASHINGTON, D.C. ENVIRONMENT

One of the aims of D.C.EBCE was to determine necessary and appropriate adaptations of the Far West Laboratory model to the Washington, D.C. environment. The evaluators examined findings from interviews with staff members.

6. SEX BIAS AND SEX ROLE STEREOTYPING

The elimination of sex bias and sex role stereotyping is a priority for D.C.EBCE. The evaluators examined this area in terms of program activities and student outcomes.

INSTITUTIONALIZING D.C.EBCE

INTRODUCTION

Making D.C.EBCE a part of the permanent offerings of the D.C. Public Schools is an area that requires attention in programming. One of the aims of the D.C.EBCE program is to offer an alternative and viable form of education to high school students in the D.C. Public Schools.

As a program is in its formative stages, it should give attention to a number of areas to gain at least tentative support as it attempts to establish its validity as a viable alternative. Support for the concept is important at many different levels, including the school administration, advisory groups, employers in the community and parents. With this in mind, interviews or questionnaires were administered to the above groups.

ADMINISTRATIVE SUPPORT

An interview with the Assistant Superintendent, Division of Career Development Programs, reveals his unequivocal support for the program. D.C.EBCE is viewed as one of a number of alternative forms of career education which the D.C. Public Schools is now examining. Alternative career educational programs are seen as an important aspect of renewing the educational environment for D.C. youth. Equally important, combining career and academic emphasis is a thrust that the school administration feels should be an integral part of school programming in order to meet the expectations of employers as well as colleges and universities.

The school administration (Associate Superintendent, Office of Educational Programs and Services, and Assistant Superintendent, Division of Career Development) considers D.C.EBCE an exemplary project for the provision of experiential career education. They noted as praiseworthy the dedication of the program director in bringing the project to fruition and in managing it most effectively. The staff is also perceived as of very high quality.

The actual adoption of the D.C.EBCE program, however, will depend on a number of considerations, including adequate demonstration of its educational viability (through third party evaluations and other assessments), budgetary considerations, and support at higher levels of decision making.

The Associate Superintendent, Office of Educational Programs and Services indicated that an important priority for the project staff for the coming year be directed toward infusion of the program. As a first step, he felt it would be important to direct dissemination activities to such groups as the Board of Education, the staff of the Office of the Superintendent, the Regional Superintendents, and school principals and counselors. Increased awareness of D.C.EBCE, he felt, was needed at these levels so that options for infusion could be examined and weighed over the coming school year.

ADVISORY COUNCIL SUPPORT

During the school year, a subcommittee of the D.C.Career Education Advisory Council was formed to give attention to matters specifically concerning D.C.EBCE. The parent committee continued to be cognizant of career education programs citywide. The D.C.EBCE program director is a member of the D.C.Career Education Advisory Council and of the D.C.EBCE subcommittee. The D.C.EBCE subcommittee was organized in October 1977 and met monthly thereafter.

A questionnaire mailed to the D.C. Career Educational Advisory Council (see Appendix 1 for the questionnaire and responses) revealed strong support for the program. Advisory Council members view D.C.EBCE as an alternative for D.C.Public Schools high school students (questionnaire, item 8), and it has a place in the overall oferings of the school system (questionnaire, item 5).

Features of the program that were considered noteworthy (questionnaire, item 6 and 9) included opportunities for students to learn first-hand about occupations, careers, and the world of work; to explore several careers before making a choice, including nontraditional careers; the involvement of the community (employers) in the educational process;

individualized learning opportunities and the motivation attendant thereto.

Responses of the Advisory Council should, however, be interpreted with caution. Only 8 out of more than 30 Council members responded to the questionnaire (perhaps due to the summer schedule), and in several cases responses were not necessarily fully supportive. A number of responses also suggest to the evaluator that some Council members hold views of D.C.EBCE that may not be fully consistent with its present approach to serving D.C. high school students (see responses to questionnaire items 7, 8 and 9).

COMMUNITY SUPPORT

The ability of the program staff to enlist the support of employers in the community to serve as resource sites is clearly in evidence. More than 200 resource sites have been identified. As shown below, there is more than an adequate number of active sites in each of the D.C.EBCE career clusters.

	Career Clusters	Number of Active Sites
I.	Consumer and Homemaking	12
II.	Communications and Media	25
III.	Fine Arts and Humanities	8
IV.	Construction and Environment	19
V.	Agri-Business, Natural Resources, Marine Sciences	10

Career Clusters	Number of Active Sites
VI. Public Service Occupations	17
VII. Health Occupations	9
VIII. Manufacturing, Marketing Distribution, Business Office Occupations	27
IX. Transportation	7
X. Hospitality, location and Personal Services Occupations	9
TOTAL ACTIVE SITES	153

Parents are supportive of the program, particularly as it is viewed as a motivating force for their children. Ninety-six percent of the parents see D.C.EBCE as providing more meaningful activities than the regular school program, and Eighty-four percent feel their child is more interested in school (see Appendix 2, questionnaire items 3a and 3b).

Through dissemination activities many presentations have been made to school and community groups to inform them of the program and to gain their support. It is premature, however, to evaluate fully the impact of these efforts in D.C.EBCE's first full year of operation.

CONCLUSIONS AND RECOMMENDATIONS

The clearest support evident from the information at hand is from the school administration, the employing community and parents. Perhaps for a variety of reasons, the evidence obtained from the Advisory Council is more limited (e.g., low return rate of questionnaires), but is nonetheless supportive.

As the program expands in the next several years, it will be important to demonstrate that D.C.EBCE has the support of schools which will feed students to the program and that it can attract and hold a significant number of students.

In preparation for expansion of the program, two staff members have been trained by the Far West Laboratory as "brokers" or trainers of other teacher-coordinators.

In general, the evidence presented suggests that D.C.EBCE is more than adequately addressing the issue of gaining acceptance as an integral part of the D.C. School program offerings as an alternative form of education for high school students.

It must be recognized that such acceptance can only be tentative, subject to the program's demonstration of its own validity. Thus, the D.C. Schools and program staff will need to give continuing consideration to this issue as the program itself moves out of its formative stage. This area has been incorporated as one of the major goals of the program for the coming year. In this regard, it is important that specific strategies for infusion be considered. D.C.EBCE is now operating as a separately functioning unit housed in an elementary school. This method of operation may have certain advantages in terms of the independence of the program, but is it the best strategy from the point of view of program infusion and in terms of the citywide "drawing power" of the program? There are several alternatives that come immediately to mind, such as linking D.C.EBCE with other career centers or establishing it as a mini-school. Such arrangements might have the advantages of shared resources and facilities appropriate to a larger student body. These observations are not intended to preclude other alternatives.

It is reconnebded that the program staff and school administration examine alternative strategies for program infusion; decide among most viable alternatives, and by the end of school year 1978-79 begin its implementation. A sound plan should include considerations of a permanent site; resource and facility sharing; administrative reporting; staffing (and staff development) requirements to accommodate larger student enrollments; and resource sites of adequate number and quality to accommodate an expanded program.

IMPLEMENTATION OF THE PROGRAM

INTRODUCTION

The primary aim of the evaluation this year concerned the quality of the implementation of the project.

The program was initially implemented in the previous school year (1976-77). The many start-up activities (including site selection, preparation, staffing, staff development, equipment, materials, etc.) were accomplished during this period.

For this reason, the evaluators felt it appropriate to examine evidence related to the continuing quality of the program.

PROGRAM MANAGEMENT

The program has strong and centralized program management. The program director appears to be the primary decision maker, but wisely draws upon input from many sources.

We have been particularly impressed with the effort extended by the program director to enlist input from all significant parties, including not only the school administrators (to whom the project reports), but also the program staff, resource persons, the Advisory Council, parents, the evaluation team, and the school community at large.

Involvement and input from the staff was a particular strength reported by the staff members themselves. The evaluators were impressed with the cohesiveness of the staff and their common understanding of the program's aims and their roles and responsibilities.

The fact that input and advice is solicited from many resources does not suggest undue diffusion of responsibility and authority. Quite the contrary, the program director appeared to the evaluators to assume both the responsibility and authority for all decisions, weighing carefully the input and advice obtained.

Further, decisions and actions appeared in every case to be made in a manner that would further the aims of the D.C.EBCE program.

STAFFING AND STAFF DEVELOPMENT

In an innovative program of the nature of D.C.EBCE, there are many staff roles and responsibilities that are often unfamiliar to teachers who have taught in traditional ways. For this reason, D.C.EBCE positions have been titled "teacher-coordinators" in order to emphasize their roles in individualizing academic instruction; in helping students select sites and carry out related projects; and in counseling students, particularly in relation to the career development process.

The resource analyst is responsible for developing and maintaining contact with resource sites that will provide an ample range of project opportunities and experiences for students.

The skills specialist has the responsibility for dealing with student needs in the basic academic skill areas of reading and mathematics.

Since the roles of D.C.EBCE staff members differ from the traditional mode of classroom teaching, a great deal of attention was given to the staff development process. The program director devoted one staff meeting each month to staff development topics. Additionally, the Far West Laboratory provided consultative assistance in training the staff in the EBCE model and in their roles and responsibilities. These services were started last year at the inception of the project and continued into the present year.

In preparation for expansion of the program, two staff members have also been trained as "brokers" who are now qualified to train additional teachers.

To evaluate the quality of the staffing and staff development efforts, the evaluators decided to address two related questions:

1. How well do staff members understand their roles and responsibilities? Interviews with all the professional staff members (4 teacher coordinators, 1 resource analyst and 1 skills specialist), the program director and school administrators reveal that the

staff is indeed well versed in their roles and responsibilities. The evaluators' observations confirm this finding.

2. How well do staff members carry out their roles and responsibilities? This question deals with the actual quality of the services delivered. For this purpose, information was obtained from the students, the program director, and the staff members.

Results from the Student Questionnaire are presented in Table 1.

The staff and program receive the highest marks from the student in meeting the primary aims of the project - academic help and developing an understanding of careers. Improving personal relationships and self understanding were not as highly rated; however, it may be that former students feel that they need help in these areas.

The program director and staff members comments support the conclusion that staff members are carrying out their roles and responsibilities effectively. All are pleased with the quality of cooperation and communication among the staff and with the effectiveness with which services were delivered to students.

One reservation was voiced in regard to resource site development. It was reported that further attention needs to

TABLE 1

STUDENT PERCEPTIONS OF THE D.C.EBCE PROGRAM AND STAFF

Item	% Who Agree
1. The instructors at D.C.EBCE were very helpful in my studies. (10)	88.6
2. The program helped me learn more about work and future careers. (6)	88.6
3. The D.C.EBCE Program gave me enough freedom to plan my own educational activities. (5)	84.1
4. The program made my academic subjects such as Mathematics, English, Social Studies more meaningful to me. (7)	84.1
5. The Program helped me learn how to get along better with others. (9)	72.7
6. The staff at D.C.EBCE helped me improve my relationships with others. (22)	68.2
7. The staff at D.C.EBCE helped me understand myself better. (18)	61.4

Note: Numbers in parentheses are the item numbers in the Student Questionnaire. See Appendix 3.

N = 44

be given to the development of additional resource sites rather than just the maintenance of the existing sites.

The staff this year consisted of 1 program director, 3 teacher-coordinators, 1 resource analyst and 1 skills specialist. All staff members were employed for the full academic year, with the exception of the skills specialist. This position was not filled until March 1978.

Generally, the quality of the staff and staff development is very sound. Staff members have progressed extremely well in understanding and carrying out their roles consonant with the framework of the Far West Laboratory EBCE model. Furthermore, in anticipation of program expansion, two teachers can now serve as "brokers" of the model.

RESOURCE SITE EXPERIENCES

While earlier evidence indicates a great deal of interest on the part of the employing community in participating in D.C.EBCE, the evaluators felt it important to assess the quality of the learning experiences afforded at the sites.

In the EBCE model, the role of the resource site persons and the nature of the site experience are not taken for granted. Orientation of the site persons is necessary to clarify their roles; develop meaningful activities for students; provide proper supervision of the students; coordinate activities within their own organizations; and coordinate activities with the D.E.EBCE project staff.

To achieve these ends, D.C.EBCE:

1. developed a Handbook for Resource Persons;
2. conducted two orientation sessions for resource persons in December 1977 and April 1978;
3. maintained continuing contact with resource persons to assure the development of meaningful activities, supervision and internal coordination; and
4. held case conferences with resource persons to review student progress and activities.

The quality of the student experiences is assessed in part by responses to the Student Questionnaire given in Table 2. The reactions are somewhat mixed. Although almost 82% of the student felt they learned a lot from the resource persons they worked with, only about 55% found the activities well planned.

TABLE 2

STUDENT PERCEPTIONS OF THE RESOURCE SITES

Item	% Who Agree
1. I learned a lot from the resource person(s) I worked with. (15)	81.8
2. The resource sites gave me the opportunity to become actively involved. (24)	72.7
3. I was given the freedom to choose the type of activities I wanted at the resource sites. (19)	65.9
4. The activities at the resource sites were usually well planned.	54.6

Note: Numbers in parentheses are the item numbers in the Student Questionnaire. See the Appendix.

N = 44.

There was also a division of opinion among the staff members. Two of five staff members had reservations about the extent to which some of the sites provided meaningful experiences, planned activities and proper supervision; while the remaining three staff members felt that the resource sites were excellent.

In summary, the quality of experiences has been mixed. D.C.EBCE needs to make provision for continuing surveillance of the quality of resource site experiences. The resource analyst reports that he is aware of these problems. He notes that whenever he has become aware of such problems (through feedback from teacher-coordinators, students or resource persons), he has attempted to expedite an immediate resolution of the problem. In some cases, resource sites were dropped when quality experiences were not forthcoming. Bringing resource persons to an understanding of reasonable expectations for high school student performance has been another problem area requiring frequent attention. The resource analyst notes that employer expectations are often at the level of college students or persons already trained.

In general, it would appear that many resource sites provide quality learning experiences. Resources sites are closely monitored in order to minimize problems. The staff continues to make provisions for assuring quality learning experiences.

It is recommended, however, that strategies for quality assurance be reconsidered. Perhaps other approaches would help prevent poor quality learning situations. Revision of the Handbook for Resource Persons; discussions at orientation meetings of potential problems and demonstrated successes with resource persons; and close initial monitoring of resource sites may be in order.

STUDENT PERCEPTIONS

Student observations provide further evidence of the quality of the program implementation.

In addition to questionspertaining to student perceptions of the staff, the resource sites and their own progress in the program, selected questions were posed to elicit student perceptions of the program itself. Table 3 indicates these results. Clearly, a large majority of the students agree that the program has been properly implemented.

The written responses of students are also supportive. When asked what they liked most about the program (see Appendix 3, Student Questionaire, item 30), they cited most frequently: freedom to plan your own work, learning about new careers, individual help, and the innovative classroom arrangement.

TABLE 3

STUDENT PERCEPTIONS OF PROGRAM IMPLEMENTATION

Item	% Who Agree
1. The D.C.EBCE Program gave me enough freedom to plan my own educational activities. (5)	84.1
2. D.C.EBCE has been one of the most exciting and challenging school experiences I have had. (13)	75.0
3. I was given an opportunity to help in planning activities sponsored by D.C.EBCE this year. (25)	68.2

Note: Numbers in parentheses are the item numbers in the Student Questionnaire. See the Appendix.

N = 44

With the exception of wanting more resource sites, students did not negate their overall positive support of the program when they were asked to list program weaknesses (Item 31) and make suggestions for further planning (Item 32). Student suggestions and criticisms were overwhelmingly constructive.

SUMMARY OF IMPLEMENTATION

The evidence presented supports the conclusion that the D.C.EBCE program is very well managed and has acquired and trained a capable staff which is delivering services effectively. Resource sites have been developed more than adequately for the most part, but further attention is needed to assure quality learning experiences for all students.

ACADEMIC QUALITY

INTRODUCTION

The D.C.EBCE program operated an individualized program that related resource site experiences, workshops in academic subjects, and individual study in order to attempt to accomplish the dual goals of academic achievement and career development.

In the EBCE model the student plays a central role in planning and carrying out his own learning, mainly through individual projects which are carefully designed to blend growth in academic, interpersonal, career, and basic skills.

Central to the academic program are the project planning packages which provide students and staff with a convenient framework for designing projects that integrate academic and career learning. Each package unites a study area (such as social sciences) and careers associated with it under a single heading. It includes goals, relevant concepts, issues and topics, sample projects, a list of available resources, and suggested readings.

While the student is given freedom to pursue self-chosen learning goals that have personal relevance, he is held strictly accountable, through a contractual arrangement, for his educational progress through carefully specified program procedures. Credit is awarded only for completed work and demonstrated progress. It is then converted into local high school equivalencies, resulting in a standard diploma and transcript.

The program is designed as an alternative for all students regardless of academic backgrounds or future plans - so long as they are willing and able to profit from the EBCE style of individualized, experience-based learning.

To assess this aspect of the program, the evaluators attempted to determine whether or not the students maintained or improved their academic skills. If EBCE is to be a viable concept, students must at least maintain their skills and, hopefully, even improve them.

Several lines of evidence were available to the evaluators.

STANDARDIZED TEST RESULTS

The Everyday Skills Test, a standardized test yielding scores in reading and mathematics, was administered to the D.C.EBCE students and to a control group of 10th grade students.

Pretests were administered in November 1977 as part of the D.C. Public Schools' regular testing program. Posttests were administered in May 1978 to D.C.EBCE and control group students.

The results for reading for 10th graders are shown in Table 4. Analysis shows that the D.C.EBCE students more than maintained their reading skills, with an average gain of 2.2. However, the control group declined (mean loss of 4.0) during the same period. The difference in gains was statistically significant ("t" = 6.45, df = 29, significant beyond the .001 level of confidence). The groups were comparable on the pretest ("t" = .31, df = 29, not significant at the .05 level of confidence).

TABLE 4

EVERYDAY SKILLS TEST IN READING

--COMPARATIVE ANALYSIS OF 10th GRADE STUDENTS

	D.C.EBCE	CONTROL GROUP
Pretest		
Mean	22.80	23.60
Standard Deviation	4.64	9.26
Posttest		
Mean	25.00	19.60
Standard Deviation	7.09	6.63
Gain		
Mean	2.20	-4.00
Standard Deviation	4.99	6.02
N	13	18

Pretest-posttest results for 11th graders also show that D.C.EBCE students maintained their skill level in reading (see Table 5*).

TABLE 5
EVERYDAY SKILLS TEST IN READING -- 11th GRADE D.C.EBCE STUDENTS

	Pretest	Posttest
Mean	28.40	29.10
Standard Deviation	10.26	11.47
N	20	20

* *A control group was not used for the 11th grade students.*

The results for mathematics seem to show that 10th grade D.C.EBCE students declined slightly in their skills in mathematics. Tenth graders had a mean loss of 2.7, while the control group had a mean gain of 1.7. The difference in gains was, however, not quite statistically significant ("t" = 1.97, df = 28).

Pretest-posttest results for 11th graders in mathematics show that 11th graders maintained their skills in this area.

Everyday Skills Test results for mathematics are shown in Table 6 for 10th graders and in Table 7 for 11th graders.

The decline in mathematics test scores may be due, in part, to the fact that a full-time skills specialist was not actually employed in the program, due to hiring delays, until March 1978. This staff member has since given a great deal of attention to mathematics achievement and reportedly plans to continue to do so over the coming year.

TABLE 6

EVERYDAY SKILLS TEST IN MATHEMATICS -- COMPARATIVE ANALYSIS OF 10th GRADE STUDENTS

	D.C.EBCE	CONTROL GROUP
Pretest		
Mean	23.20	25.20
Standard Deviation	5.75	8.57
Posttest		
Mean	20.50	26.90
Standard Deviation	5.95	9.17
Gain		
Mean	-2.70	1.70
Standard Deviation	5.97	8.56
N	13	17

TABLE 7

EVERYDAY SKILLS TEST IN MATHEMATICS

-- 11th GRADE D.C.EBCE STUDENTS

	Pretest	Posttest
Mean	27.00	27.30
Standard Deviation	14.05	14.13
N	20	20

WRITING SKILLS

Student writing skills provides another area of academic achievement. The EBCE program requires students to complete myriad writing tasks - from orientation through project reports.

To test this area, the evaluators devised a special writing sample instrument (see Appendix 4), which was administered on a pretest (September) and posttest (May) basis to D.C.EBCE students.

In this test, grammatical and spelling error rates improved by 4%; however, idea rates (the number of ideas per hundred words) decreased by 2%. (See detailed results in

Appendix 4). These change rates are probably not statistically significant. The results suggest that writing skills have been maintained, but perhaps not improved, as a result of the D.C.EBCE experience.

Considering the importance of writing skills in the D.C.EBCE program, the Program Director reports that a writing sample was used for the first time in screening applicants for the spring 1978 semester. An analysis of the evaluator's writing sample verified that students entering in the spring 1978 semester had better writing skills than those who entered earlier.

COURSE GRADES AND ACADEMIC CREDIT

Course grades were analyzed in terms of grade point average (GPA) using the standard formula:

$$\text{GPA} = \frac{\text{TOTAL OF GRADE VALUES}}{\text{NUMBER OF COURSES}}$$

Grade values are 4 points for an A; 3 points for a B; 2 points for a C; 1 point for a D; and 0 points for an F.

The results show that the average D.C.EBCE student had a GPA if 2.4, which is equivalent to a high 'C'. About 32% of the students had GPA's of 3.0 (grade of B) or higher and only about 15% had GPA's lower than 2.0 (grade of C). The highest GPA was 3.7 and the lowest GPA was 1.4.

Although objective data was not available to compare these GPA's with a normative group, the evaluator's experience suggests that the student average grades are much more than acceptable. A 'C' or GPA of 2.0 is a typical average.

The earning of academic credits also yielded insights into the academic quality of the program. By the end of the school year in June the average (median) amount of Carnegie credits earned was 2½ for those students who attended the program for the full academic year; 6 of 48 students earned 4 or more credits.

Students who received an incomplete in an academic course were given the opportunity to finish the required assignment during the summer. For this reason, the average of 2½ Carnegie credits is probably lower than the students actual achievement.

The adequacy of the number of Carnegie credits earned cannot, unfortunately, be assessed in objective terms as there is no data available for comparative purposes. It may well be that earning of 2½ to 3 Carnegie units per year is probably adequate for maintaining a pace comparable to other high schools.

On the other hand, many students probably continue to require encouragement and guidance in completing the requirements for their academic work.

ATTENDANCE

Daily attendance also gives evidence as to the academic quality of the program. In this regard, average (median) daily attendance was 81.7%, which is about comparable to system-wide results for high schools in the District of Columbia.

SUMMARY AND RECOMMENDATIONS

In summary, it would appear that the results, vis-a-vis maintaining academic skills, shows a number of strengths. Reading results for 10th grades showed more improvement for D.C.EBCE students than for the control group, but results for mathematics were not as good. Written grammar, punctuation and spelling showed modest improvement, but written concepts showed a modest decline. Eleventh grade students maintained their skills in both reading and mathematics.

Earning of academic credits (Carnegie units) at an average of 2.5 by the end of the school year is probably adequate. However, there was no data available to make an objective comparison. Attendance rates at about 82% are comparable to system-wide results for D.C. high schools.

Overall, with the evidence available it appears that academic skills are being maintained and that the D.C.EBCE staff is aware of the steps that need to be taken to bring about further improvements in the students academic performance.

CAREER DEVELOPMENT

INTRODUCTION

In this area, the evaluators attempted to determine whether the D.C.EBCE program helped students develop the skills and attitudes requisite to effective career decisions and a wide knowledge of the world of work.

CAREER MATURITY INVENTORY

The Career Maturity Inventory (CMI) was given to assess attitude and skill improvement. The CMI was administered to 10th and 11th grade students and to a control group on a pretest and posttest basis.

As shown in Appendix 5, there was no difference between scores of the D.C.EBCE and control groups. Nor did either of the groups achieve significant gains on this instrument.

These results may be due to several factors. First, there was a substantial attrition rate in those groups tested. For example, only 26 or about half of the D.C.EBCE students who attended the program in fall and spring completed both a pretest and a posttest on the CMI.

Second, pretesting was not carried out at the same time for both groups - September for D.C.EBCE students and November for controls.

Third, it is possible that this instrument is not measuring the types of outcomes appropriate for the D.C.EBCE program.

In terms of national means, D.C.EBCE students score just below national norms (from 25th to 48th percentile) on the Attitude Scale, Knowing Yourself (Self Appraisal), and Choosing a Job (Goal Selection).

On the other hand, D.C.EBCE students scored above national norms (54th percentile to 70th percentile) on What Should They Do? (Problem Solving). (Parenthetically, another instrument used to assess self-concept development -- the Tennessee Self Concept Scale -- also failed to demonstrate significant results; see Appendix 6).

STUDENT AND TEACHER PERCEPTIONS

Reports from students and teachers were more edifying about this important dimension of the program. The students indicated (Student Questionnaire) that they obtained the benefits shown in Table 8. The students clearly feel that they have learned about careers; have explored their own career interests; have learned about their own talents; and now more clearly see the importance of school in the world of work.

Written comments by the students (see Appendix 3, Student Questionnaire, item 29) emphasized that they had learned about the importance of career planning, education, hard work, how to apply for a job, salary ranges, and other information. Many mentioned specific careers which they had had an opportunity to investigate for the first time.

Teacher coordinators, administrators, and the Advisory Council felt that the career development aspect of the program was perhaps its most important. Students begin to understand what goes on in the world of work and the kinds of information necessary for different careers. They have started to look for jobs, are learning how to seek out job opportunities and how to apply for jobs. Students are examining their aspirations, and relating these to their knowledge and skills.

It was also pointed out that students brought with them 15 to 16 years of "deprived exposure." Thus, gains may be mostly in developing an awareness of work and careers.

On the other hand, teacher coordinators felt that there was much more room for improvement in these areas, and that steps must be taken to improve the assistance given to students. Several teacher-coordinators felt that more attention should be given to occupational information, educational requirements, discussions of student aspirations, family influences, peer influences, and relating information and experiences to one's self. It was noted that the results of the CMI were not explicitly reviewed and discussed with students. The evaluator concurs with these observations.

TABLE 8

STUDENT PERCEPTIONS OF D.C.EBCE CAREER BENEFITS

Item	Percentage Agreeing
1. Learned more about work and future careers. (6)	88.6
2. Learned how school subjects relate to world of work. (12)	88.6
3. Helped me explore my own career interests. (14)	86.4
4. Made academic subjects more meaningful. (7)	84.1
5. Helped me learn about my own talents. (17)	79.6
6. More interest in studies because of importance of school in working world. (21)	77.3

Note: Statements are paraphrased. See Appendix 3 for the complete questionnaire. Item numbers are in parentheses above.

SUMMARY AND RECOMMENDATIONS

Student and teacher-coordinator reports indicate that important gains have been achieved in the area of career development. Nonetheless, the nonsignificant findings on the CMI indicate that there is still room for improvement.

Additional strategies need to be developed and should include not only the resource site experiences, but career guidance sessions that focus upon how to explore careers. At the end of school term the staff reported that it has reassessed its strategy for the coming year and would hope to incorporate many career guidance aspects. To aid in this area, a career advisor has been assigned to the project.

ADAPTING THE FAR WEST LABORATORY MODEL TO THE WASHINGTON, D. C. ENVIRONMENT

One aim of D.C.EBCE was to determine necessary and appropriate adaptations of the Far West Laboratory model to the Washington, D.C. student and employer. The emphasis here was to tailor the program to the specific needs of Washington, D.C.

Several observations can be made:

In general, the staff agrees that the overall model is quite well suited to Washington students and employers. One area that did appear to require attention are certain aspects of the program packages. Some of the packages were not sufficiently explicit to enable students to use them independently. Teacher coordinators have given individual assistance to help students plan projects and complete the packages. Additionally, during the summer months a student handbook was developed giving explicit step-by-step directions on how to plan and carry out a project and complete the various elements of the program packages.

An additional area that required attention is the fusing of the D.C. Public Schools emphasis on Competency Based Curriculum (CBC) with EBCE.

Inasmuch as the development and utilization of a competency based curriculum is the chief thrust of the D.C.Public School school system and a top priority of the Division of Career Education, throughout the year the program staff was involved in a CBC awareness effort in order to be a viable part of this endeavor.

Teacher coordinators followed the CBC instructional plan in preparation for each Advisory Group Meeting (group guidance session) and each Project Seminar and Academic Workshop. They are writing acceptable behavioral objectives which utilize the nine action verbs and identify appropriate instructional activities in performance agreement with behavioral objectives and assessment tasks in performance agreement with behavioral objectives.

In addition, the program staff has recognized the need to rewrite the entire set of Project Package Goals. To this end the Curriculum Design Task Force (16 teachers from Eastern and other comprehensive high schools) worked with the staff this summer to accomplish this task.

In summary, it would appear that the Far West Laboratory model is very well suited to the Washington, D.C. environment.

Selected modifications were needed in the program packages to better tailor them for students use and to link them with the emphasis upon a competency based curriculum.

SEX BIAS AND SEX ROLE STEREOTYPING

One of the priorities of career education programs is the elimination of sex bias and sex role stereotyping. In this context, every effort is to be made to eliminate signs of sex bias and sex role stereotyping in project assignments; in the behavior of the staff toward students; in counseling and guidance; in the curriculum and teaching materials; and, perhaps most importantly, in the development of the career plans and aspirations of the students.

To assess this area, the evaluators examined a variety of evidence, including project documents, interviews with the staff, information provided by the program director, and student responses to the student questionnaire.

Staffing patterns and student enrollments are the first demonstration of sex equity in the project. The program director is female and the remainder of the staff is comprised of 4 males and 3 females. Student enrollment is 21 male and 45 female at the end of the school year. In its efforts to enhance sex equity, the D.C.EBCE program has been working closely with the Director of Sex Equity, Division of Career Development Programs (Vocational Education).

In the project itself, a great deal of attention has been given to this area. In selecting project sites, students are required to select 1 out of 5 sites that represents a "non-traditional" sex role for themselves. Girls have participated in police, fire-fighting, and scientific projects; while boys have served as secretaries and have observed male nurses in action.

At project sites, the staff has asked students to observe the roles of men and women. There have, for example, been many opportunities to observe women in many important roles in science and commerce.

These site observations have been integrated with continuing teaching activities in which there are discussions of sex equity and student thinking in this regard.

Several sessions were devoted entirely to discussions of sex equity, as an attempt to get students to explore their own thoughts and feelings. The staff felt that these sessions were extremely helpful in creating an awareness of the subject, the staff views, and the students' own perceptions. The staff observed that many students initially harbored "traditional" views of sex roles in careers; however, many of them changed their viewpoints after sex equity considerations were openly discussed. The staff also observed, however, that for some students - particularly the boys - the idea of working in a career in a "non-traditional" sex role was not always fully accepted. Staff members plan to give this area continued attention. In particular, emphasis will be placed this next year on a parent awareness program.

Staff members also attended a workshop dealing with sex equity. As a part of this workshop, the staff completed a checklist of activities oriented toward the enhancement of sex equity. The project carried out the recommended activities in all respects.

To assess the impact of staff efforts to enhance sex equity, the evaluators included a number of items on the student questionnaire pertaining to this area. The results are shown in Table 9.

About 91% of the students now realize that either sex can now qualify for many jobs that used to be thought of as "a man's job" or "a woman's job", and 84% learned that they can aim for any occupation without regard to their sex. However, only 57% actually enjoyed working in a "non-traditional" sex role. This finding seems to substantiate the staff's observations mentioned earlier. Apparently, there are many perceptions of career sex roles that are well established by our culture and that are deeply ingrained in students' thinking by the time they are in high school. As the staff observed, more work will be needed to overcome these deep-seated attitudes.

The evidence presented here clearly demonstrates the achievements of the D.C.EBCE program in striving to achieve sex equity. The staff deserves high marks in this area in every respect, both in terms of past activities and in terms of plans for the coming year.

TABLE 9

STUDENT PERCEPTIONS OF SEX EQUITY

Item	% Agree	% Disagree	% Not Sure
1. There are jobs for which men and women can now qualify that used to be thought of as "a man's job" or "a woman's job". (8)	90.9	2.3	9.1
2. I found out through D.C.EBCE that I can aim for any occupation without regard to my sex. (20)	84.1	4.6	11.4
3. I enjoyed the experience of being at a resource site where I did work that is not considered "traditional" for my sex. (26)	56.8	29.6	13.6

Note: Percentages add to 100 within rounding error.

N = 45

Numbers in parentheses are item numbers on the Student Questionnaire in Appendix 3.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based upon the findings of this evaluation:

The D.C.EBCE program, in its formative stages, has demonstrated a considerable amount of progress in gaining acceptance as an integral part of the D.C. Schools program offerings as an alternative form of secondary education. In the future, the program will need to address itself to the accommodation of larger student enrollments. It is, therefore, recommended that the program staff and school administration examine alternative strategies for program infusion; decide upon the most viable alternatives, and begin its implementation by the end of the coming school year. This plan should include considerations of a permanent site; resource and facility sharing; administrative, reporting, staffing (and staff development) requirements for larger enrollments; and resource sites of adequate quantity and quality for an expanded program.

Under the excellent direction of its program director, the D.C.EBCE program was found to exceptionally well managed, with a trained staff capable of delivering effective services to students. For the most part, resource sites were also found to be more than adequately developed.

It is recommended that continuing and further attention be given to staff development of resource sites in order to assure that the program will continue to assure quality learning experiences for all participating students.

Academic quality shows many strong areas. When compared with a control group, D.C.EBCE students demonstrated significant improvement in reading. Eleventh grade students maintained their skills in mathematics. Students also made improvements in grammar, punctuation and spelling skills. Grade Point Averages were more than acceptable with an average GPA of 2.4, 32% of the students with 3.0 (B) or higher and only 11% with less than 2.0 (C). Average of Carnegie Units completed by the end of the school year was an acceptable 2.5, however this is undoubtedly a low figure as some students were completing course requirements in the summer months. However, while D.C.EBCE proved especially effective in improving academic skills in some area, a modest decline in mathematics skills (of 10th Graders only) and written concepts were also noted. The decline in mathematics is due to the late employment (March 1978), of a skills specialized. To the credit of the program director and staff members, steps for making further improvements in academic performance have already been taken, and the academic aim of the program during its first year appears to have been more than adequately accomplished.

It is, therefore, recommended that the staff continue its attention to making further improvement in the area of student achievement.

Student and teacher coordinator reports indicate substantial gains in the area of career-development. Resource sites provided invaluable learning experiences to D.C.EBCE students, and students seemed well on their way to developing a wide knowledge of the world of work and to developing a basis for making sound career decisions. However, nonsignificant findings of the Career Maturity Inventory indicate that there may be some room for improvement in this area. The D.C.EBCE staff reports that it reassessed its strategy for the coming year and plans to incorporate many new guidance aspects. A newly assigned career advisor will aid in this process.

It is recommended that the new career development strategy be implemented and that it include not only resource site experiences, but career guidance sessions focusing upon how to explore careers.

The experience of this first full year of operation demonstrated that the Far West Laboratory Model is well suited to the Washington, D.C. environment. Two areas of adaptation were noted, namely, a restructuring of program packages accomplished this summer with the assistance of the

Curriculum Design Task Force and the fusing of D.C.EBCE and CBC goals and methods. It is recommended that the Far West Laboratory Model be retained and the staff continue its worth-while efforts to tailor make the model to fit the needs in Washington, D.C.

The D.C.EBCE program has demonstrated that it can effectively eliminate sex bias in program activities and at least provoke student thought in an area that often has strong cultural roots. The staff deserves commendation in this area for its past activities and those planned for the coming year.

It is recommended that the staff continue to coordinate its sound efforts in this area with Director, Office of Sex Equity, the Division of Career Development Programs (Vocational Education). It is also recommended that the staff implement its planned program with parents in order to address deep-seated cultural attitudes.

In closing, two additional aspects should be mentioned. The evidence presented here leaves little question that the program should be continued. The apparent positive impact of the program on students attitudes and motivation for school is an important feature that should not be overlooked.

Finally, the director and staff are to be commended for their attention to making continuing improvements in all aspects of the program. This orientation to the future of the program bodes well for its viability in the D.C. Public School environment.

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APPENDIX 1

ADVISORY COUNCIL QUESTIONNAIRE

When asked whether they felt that the Experience Based Education program had a place in the high school program, six of the eight Advisory Council members responding replied affirmatively and two were not sure. Members were asked to substantiate this response: the combination of vocational learning with academic and personal learning objectives provides a more stimulating and relevant high school experience; career awareness, career preparation and alternative educational aspects provide a student with experiences that are positively to his advantage; there is a limit to what can be learned in the classroom, and some things can only be learned through experience; the program is highly individualized; both the Competency-Based Curriculum and the experience component are vital to high school education; students are allowed to become oriented to the world of work and further educational needs. Of those two members responding that they were not sure whether Experience Based Education has a place in the high school program, one was not familiar enough with the program to comment and the other provided no explanation to the response.

Advisory Council members were asked to site some of the special features of D.C.EBCE they liked most: the counseling aspect of the teacher-coordinator's role; the numerous opportunities for students to acquire first-hand learning experiences - about life and potential career choices; the involvement of the community in the educational process; the individual and decision making aspects; the opportunity to pursue several career interests prior to making a career choice; the dedicated and motivated D.C.EBCE staff and program director; the staff and students can freely communicate with each other; the opportunity to explore learning experiences on an individual basis; the students are encouraged to make contributions to the school; the opportunity of students to observe first-hand workers performing their jobs; the individualized contracts; reality learning; individual goal setting.

Advisory Council members were asked in what way the D.C.EBCE program could be improved: no major improvements seem necessary; more space should be allocated for physical recreation, workshops and classrooms; the program should become a more integral part of the school system; a wider variety of resource sites; by providing more "case histories" and youth input at Advisory Council meetings; by tying it into Widening Horizons. Focus as a sequal step; wider dissemination efforts for teachers, students and the public.

Advisory Council members were asked to what extent they felt that the program should recommended as an alternative for high school students in the D.C. Public Schools:

it should be available for students who need a better understanding of what education can do for them, who need motivation to stay in school, who have difficulty setting goals for themselves; to the highest extent possible, since it gives many a chance to prepare themselves for professional careers; the program provides a positive and effective means of providing students with a real understanding of careers and the world of work and the relationship of academic pursuits to that understanding; should be formally introduced into each high school as a career preparation project --- should enrich any program.

APPENDIX 2

PARENT QUESTIONNAIRE

1. How did you become interested in the D.C.EBCE Program?

-- through my child (6 or 21.4% responding)
-- blank (5 or 17.9%)
-- child brought home pamphlet (3 or 10.7%)
-- through a counselor (2 or 7.1%)
-- attended sessions at the school (1 or 3.6%)
-- child explained the program to me
-- co-worker informed me
-- newspaper advertisement
-- recreation counselor
-- child needed individual help
-- child seemed interested
-- recommended by teacher or principal
-- from a friend
-- child was unhappy with present surroundings

---

2. As a parent, what role did you play in D.C.EBCE?

-- none (3 or 10.7% responding)
-- talked to the instructor about the program (3)
-- kept in touch with the child's teacher (3)
-- attended staff meetings (3)
-- kept the child interested in the program (3)
-- blank (3)
-- a parental role (2 or 7.1%)
-- supported the child in assignments (2)
-- tried to gain child's interest in the program (2)
-- enrolled child (1 or 3.6%)

-- talked to the instructor about the program

-- motivated the child

-- tried to participate in the program

-- provided needs for sites

-- tried to keep up with child's progress

---

3. Please give your opinions of the D.C.EBCE Program by answering the following questions:

	#Agree	#Disagree	#Not Sure
a. D.C.EBCE Program activities appear to be more meaningful than the regular school activities.	25	0	1
b. My child is more interested in the D.C.EBCE Program than in regular school.	21	1	2
c. D.C.EBCE has kept me well informed about program activities.	21	2	1
d. D.C.EBCE staff have kept me well informed about my child's progress.	22	2	0

---

4. In your opinion what are the strengths of the D.C.EBCE Program?

-- parents kept well informed (4 or 11.8% responding)

-- job sites (4)

-- helps child improve goals (2 or 5.9%)

-- teachers seem interested in students (2)

-- strengthened child's interest in the world and school (2)

-- matures the child (2)
-- improves child's work in school (1 or 2.9%)
-- open up job opportunities
-- no confinements
-- individualized help
-- everything
-- teaches importance of careers
-- fine school and staff
-- informs students of current issues
-- challenging to the students
-- apprentice type training
-- child learns to work in communities
-- helps child to grow personally
-- prepares child for the world of work
-- provides experience
-- good program
-- gives child self control

---

5. What suggestions do you have to improve the D.C.EBCE Program, especially concerning parent involvement?

-- blank (7 or 25% responding)
-- keep parents better informed (4 or 14.7%)
-- better supporting parents (4)
-- more parent-teacher meetings (3 or 10.7%)
-- more report cards (2 or 7.1%)
-- No comment (2)
-- newsletter for parents (1 or 3.6%)
-- better student-parent communications
-- continue as is
-- anything to improve my child's well-being

APPENDIX 3

STUDENT QUESTIONNAIRE

1.	Your age:	15 -- 3	6.8%
		16 -- 17	38.6%
		17 -- 18	40.9%
		18 -- 5	11.4%
		B1 -- 1	2.3%
2.	Sex:	Male- 15	34.1%
		Female- 29	65.9%
3.	Grade:	10th- 18	40.9%
		11th- 26	59.1%

4. When did you start in the program?

Summer 1977	14	31.8%
Fall 1977	20	45.5%
Spring 1978	9	20.5%

D.C.EBCE STUDENT'S QUESTIONNAIRE RESULTS

Item.	Agree		Disagree		Not Sure	
	f	%	f	%	f	%
5. The D.C.EBCE Program gave me enough freedom to plan my own educational activities.	37	84.1	3	6.8	4	9.1
6. The program helped me learn more about work and future careers.	39	88.6	3	6.8	2	4.5
7. The program made my academic subjects such as Mathematics, English, Social Studies more meaningful to me.	37	84.1	3	6.8	4	9.1
8. There are jobs for which men and women can now qualify that used to be thought of as "a man's job" or "a woman's job".	40	90.9	1	2.3	4	9.1
9. The Program helped me learn how to get along better with others.	32	72.7	6	13.6	6	13.6
10. The instructors at D.C.EBCE were very helpful in my studies.	39	88.6	2	4.5	3	6.8
11. The activities at the resource sites were usually well planned.	24	54.6	14	31.8	6	13.6
12. D.C.EBCE showed me how my school subjects relate to the world of work.	39	88.6	2	4.5	3	6.8

D.C.EBCE STUDENT'S QUESTIONNAIRE RESULTS

Item.	Agree		Disagree		Not Sure	
	f	%	f	%	f	%
13. D.C.EBCE has been one of the most exciting and challenging school experiences I have had.	33	75.0	6	13.6	5	11.4
14. The D.C.EBCE Program helped me explore my own career interests.	38	86.4	5	11.4	1	2.3
15. I learned a lot from the resource person(s) I worked with.	36	81.8	6	13.6	2	4.6
16. D.C.EBCE Program activities motivated me to continue my education beyond high school.	29	65.9	3	6.8	12	27.3
17. The Program helped me learn about my own talents.	35	79.6	6	13.6	3	6.8
18. The staff at D.C.EBCE helped me understand myself better.	27	61.4	12	27.3	3	6.8
19. I was given the freedom to choose the type of activities I wanted at the resource sites.	29	65.9	11	25.0	4	9.1
20. I found out through D.C.EBCE that I can aim for any occupation without regard to my sex.	32	84.1	2	4.6	5	11.4
21. I became more interested in studying when I realized the importance of school work in the working world.	34	77.3	2	4.6	8	18.2

D.C.EBCE STUDENT'S QUESTIONNAIRE RESULTS

Item.	Agree		Disagree		Not Sure	
	f	%	f	%	f	%
22. The staff at D.C.EBCE helped me improve my relationships with others.	30	68.2	8	18.2	6	13.6
23. D.C.EBCE motivated me to complete my high school diploma.	35	79.6	4	9.1	5	11.4
24. The resource sites gave me the opportunity to become actively involved.	32	72.7	8	18.2	4	9.1
25. I was given an opportunity to help in planning activities sponsored by D.C.EBCE this year.	30	68.2	13	29.6	1	2.3
26. I enjoyed the experience of being at a resource site where I did work that is not considered "traditional" for my sex.	25	56.8	13	29.6	6	13.6
27. D.C.EBCE helped me understand the value of education a little better.	37	84.1	2	4.6	5	11.4
28. I wish to continue in D.C.EBCE as long as I can.	28	63.6	5	11.4	11	25.0

D.C.BCE STUDENT'S QUESTIONNAIRE RESULTS

29. List three important things you have learned about careers through D.C.EBCE

Responses	f
About Specific Careers	17
-- Journalism (6)	
-- Gardening (2)	
-- Working with the deaf (2)	
-- Accounting	
-- Biology	
-- Nursing	
-- Photography	
-- Retail Sales	
-- Science Teacher	
-- X-Ray technician	
Skills for Getting a Job	10
Career Planning	8
About work in relationship to personal life	8
Importance of Education	3
Doing jobs regardless of sex	2
Miscellaneous	4
-- Importance of the working world	
-- Purpose of organizations	
-- Salary ranges	
-- How to help people	

D.C.EBCE STUDENT'S QUESTIONNAIRE RESULTS

30. What do you like most about the Program?

Responses	f
Freedom in planning your own work	15
Learning about new careers	6
Individual help	6
Innovative classroom arrangement	4
Going to resource sites	2
Work experience gained	2
The teachers	2
Working and learning at one's own pace	2
Traveling around the city	1
Learning Weak and Strong Points in Studying	1
Meeting Different People	1

D.C.EBCE STUDENT'S QUESTIONNAIRE RESULTS

31. What do you like least about the Program?

Responses	f
Blank/No Comment	9
Nothing	4
Lack of School Activities	3
The Classes -- In general -- Not enough classes -- Classes too long	3
School Wasn't Organized	2
The Writing	2
Goal Packages not relating to site	2
Miscellaneous -- Problem getting a site -- Catching buses -- Resource persons' treatment of students -- Attendance at group meetings -- Amount of work -- Filling out forms -- Checks never on time -- Too many students -- Not a good high school -- Teachers calling house at night	10

D.C.EBCE STUDENT'S QUESTIONNAIRE RESULTS

32. What suggestions do you have for the D.C.EBCE staff to consider when they plan the Program for next year?

Responses	f
More sites	7
Better facilities	3
Expenses and fee tokens	3
More activities	2
Yearbook and class rings	2
More books and supplies	2
Better organization	2
Miscellaneous	11

-- More student participation
-- Keep family contact
-- Talk to the students more
-- Have more students
-- Specific date for projects
-- More classes
-- Give resource people more information
-- More counselling
-- More instruction
-- More rules
-- Better prepared goal packages

APPENDIX 4

RESULTS OF THE WRITING SAMPLE PRETEST AND POSTTEST

	Pretest Medians	Posttest Medians	Change
Number of Ideas	8	4	-4
Number of Errors	19	11	-8
Number of Words	152	125	-127
Idea Ratio (Ideas/Words x 100)	5	3	-2
Error Ratio (Errors/Words x 100)	13	9	-4

N = 32

APPENDIX 5

COMPARATIVE ANALYSIS OF THE CAREER MATURITY INVENTORY

Group and Statistic	Attitude Scale		Knowing Yourself (Self Appraisal)		Choosing a Job (Goal Selection)		What should they do (Problem Solving.	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
D.C.EBCE								
10th Grade - Mean	31.1	30.6	10.2	9.3	11.7	11.4	8.9	9.2
Standard Deviation	4.16	5.85	2.60	3.38	1.90	4.11	2.26	3.74
N	11	11	11	11	11	11	11	11
11th Grade - Mean	34.2	33.4	13.5	11.4	12.5	11.9	9.8	10.7
Standard Deviation	3.92	6.23	2.70	6.23	2.81	4.64	2.56	3.85
N	16	16	16	16	17	17	17	17
CONTROL GROUP								
10th Grade - Mean	29.7	29.0	9.5	10.0	10.1	10.6	7.5	7.8
Standard Deviation	4.66	7.57	3.09	3.77	3.22	2.38	4.28	2.95
N	24	24	24	24	24	24	24	24
11th Grade - Mean	32.6	31.0	11.4	11.5	11.4	12.1	8.4	8.8
Standard Deviation	4.48	5.81	2.61	3.87	2.80	3.29	2.23	2.98
N	20	20	20	20	20	20	20	20

Note: Differences between means of D.C.EBCE and Controls were not statistically significant at the .05 level of confidence, using the "t" test.

APPENDIX 6

RESULTS OF THE TENNESSEE SELF CONCEPT SCALE

Group and Statistic	Self Criticism		Total Positive	
	Pre-test	Post-test	Pre-test	Post-test
D.C.EBCE				
10th Grade - Mean	50.6	48.4	48.3	46.6
Standard Devistion	10.82	8.66	13.29	8.67
N	11	11	11	11
11th Grade - Mean	49.5	47.2	47.1	46.3
Standard Deviation	10.01	9.62	10.71	11.25
N	22	22	22	22
Control Group				
10th Grade - Mean	43.3	45.1	49.9	50.8
Standard Deviation	8.71	4.86	8.79	8.67
N	24	24	24	24
11th Grade - Mean	46.4	45.6	51.8	51.3
Standard Deviation	10.49	9.32	10.41	11.78
N	19	19	19	19

Note: Differences between means of the D.C.EBCE and Controls were not significant at the .05 level of confidence, using the "t" test.